Professional Characteristics of Teacher Certification Program Graduates

Chanie Barker
Scott Burris
John Rayfield
Rudy Ritz
Tanner Choate
Texas Tech University

2500 Broadway
Lubbock, TX 79409
(806-742-2011)
chanie.barker@ttu.edu

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Teacher shortage, especially in agricultural education, has been a major issue for over 40 years (Kantrovich, 2007). The high rate of attrition from burnout, retirement, and self-efficacy has been studied for years, yet the numbers of agricultural programs closing and unfilled teaching positions have still increased. The increase in attrition is a result in a shortage of teachers. Therefore, quality teachers are in high demand. With education being an ever-changing field, it is important for teacher preparation programs to keep up with the changes that are made. The curriculum teachers experience during their preparation can affect their teaching career. It is critical to implement courses that prepare pre-service teachers to enter the profession of teaching.

Additionally, preparing students to perform on certification exams, validating their preparation to teach an ever-widening list of technical subject areas, adds to the challenges in teacher preparation programs. In Texas, recent changes in the secondary curriculum, state certification exam, and standards for beginning teachers has led Texas Tech Univerity to reform their curriculum in order to prepare their students. These changes have resulted in a need to assess the level of preparation of program graduates completing the program. Are Texas Tech University Agricultural Education Teacher Certification program graduates prepared to be entry-level agricultural science teachers?

The decision to enter the teaching profession, and the subsequent decision to stay or leave the profession, is largely dependent on one's self perceived ability to perform the job-related duties (McKim & Velez, 2016). Self-efficacy is defined by Bandura (1994) as an individual's belief in their ability to perform a task or achieve an outcome. The four sources of influence that suggest a strong sense of self-efficacy are: mastery experience, vicarious experiences, social persuasion, and physiological and emotional state (Bandura, 1997).

The purpose of this study was to describe the professional attributes associated with the program graduates of Texas Tech University Agricultural Education teacher certification program graduates. A quantitative descriptive research design was used to accomplish this objective. The target population was comprised of teacher certification graduates reflecting the change in program design. These graduates were from the years of 2012-2017. The data collected were part of a larger program evaluation and reflect the information from one section of a researcher developed instrument. A total of 78 program graduates were identified for this study. Data were collected from 59 program graduates ($N = 59$), resulting in a total response rate of 75.6%.

To describe the personal teaching demographics of the participants ($N = 59$), the following variables were used: gender, year of graduation, current teaching status, currently teaching agricultural science, number of schools taught in, number of teachers in agricultural program they work in and pathways currently teaching. There were double the number of female ($n = 40$, 67.8%) that participated in the study than male ($n = 17$, 28.8%).

Table 1 depicts the frequencies and percentages of the program graduates teaching status. An average of 50% ($n = 29$) of the program graduates were *currently teaching*. There were 37.9% ($n = 22$) that were *not currently teaching* and 12.1% ($n = 7$) that responded with *I have never taught*. Of the 50% ($n = 29$) that are teaching, 86.2% ($n = 25$) are currently teaching agricultural science. That allows for 13.8% ($n = 4$) of those teaching to be teaching in other disciplines. Of the program graduates that are currently teaching agricultural science ($n = 25$), over half of them have only taught in one school. The agricultural science pathway taught by the current agriculture teachers. The two most frequently taught pathways by the program graduates

were *Animal Science* (*n* = 16, 64.0%) and *Plant Science* (*n* = 10, 40.0%). *Natural Resources* (*n* = 3, 12.0%) and *Environmental Service Systems* (*n* = 2, 8.0%) were least frequently identified. The size of the agricultural programs the participants taught in varied from one teacher departments to five teacher departments. There were 10 (40.0%) participants teaching in a two teacher program, while there was only 1 (4.0%) teaching in a five teacher program.

Table 1
Personal Attributes of the Program Graduates (*N* = 59)

Characteristic	*f*	%
Currently Teaching		
Yes	29	50.0
Not currently	22	37.9
I have never taught	7	12.1
Currently Teaching Ag Science		
Yes	25	86.2
No	4	13.8
Number of Schools Taught At		
One	16	27.1
Two	6	10.2
Three	2	3.4
Number of Teachers in the Program		
One	4	16.0
Two	10	40.0
Three	6	24.0
Four	4	16.0
Five	1	4.0

Over half of the participants for this study were female. Likewise, over half were currently teaching. These findings align with other studies, such as, the study of the supply and demand in agricultural education for 2007, where Kantrovich found that only half of agricultural education teacher certification graduates were entering into the profession of teaching. Twenty-five of the participants currently teaching were teaching agricultural science. The three most popular taught pathways were *Animal Systems, Plant Systems and Power Structural* and *Technical Systems*. The least popular taught pathways were *Environmental Service Systems, Natural Resource Management* and *Agribusiness*.

These findings imply a significant number of program completers are not going into the field or they are not staying in the teaching field. Rice and Kitchel (2016) suggested part of the reason teachers could be struggling could be from lack of teacher preparation curriculum. It is important to consider the concerns or praises delivered by the program graduates. Eacute and Esteve (2000) stated the disagreements have been made on if teacher preparation programs are preparing preservice teachers adequately. Stair, Warner and Moore (2012) expressed "by identifying the concerns of pre-service teachers and early career teachers in the field, teacher educators can better determine appropriate course content and sequence coursework and in-service to better reflect the needs of these different groups" (p. 160). Teacher education programs should be continually evaluated to ensure they meet the constantly evolving professional demands of program graduates.

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